

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

<b>Date of mailing</b> (day/month/year) 13 June 2001 (13.06.01)	
<b>International application No.</b> PCT/GB00/03394	<b>Applicant's or agent's file reference</b> M99/0466/PCT
<b>International filing date</b> (day/month/year) 04 September 2000 (04.09.00)	<b>Priority date</b> (day/month/year) 04 September 1999 (04.09.99)
<b>Applicant</b> ROSCOE, Keith	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

29 March 2001 (29.03.01)

☐ in a notice effecting later election filed with the International Bureau on:2. The election ☒ was☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia TEFY Telephone No.: (41-22) 338.83.38
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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/GB 00/03394

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 B08B9/032

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 B08B E03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)  
EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 26 29 301 A (ENNEKING) 5 January 1978 (1978-01-05) page 5, line 26 - line 30 page 9, line 24 -page 10, line 5; figure	1,2,6,7, 9-11,14
Y		3,15,17, 19-23
Y	US 5 915 395 A (SMITH) 29 June 1999 (1999-06-29) abstract column 2, line 4 - line 37 column 3, line 6 - line 49 column 4, line 23 -column 5, line 4; figures	3
A		1,6, 9-11,14

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

7 December 2000

Date of mailing of the international search report

15/12/2000

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Van der Zee, W

# INTERNATIONAL SEARCH REPORT

Int. .onal Application No  
PCT/GB 00/03394

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	US 5 724 701 A (JONES) 10 March 1998 (1998-03-10) abstract column 4, line 60 -column 5, line 5 column 6, line 23 - line 31 column 7, line 41 - line 52 column 8, line 14 - line 21; figures 1,3	15,17, 19-23
A		1,6, 9-11,14, 18

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/03394

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 2629301	A	05-01-1978	NONE	
US 5915395	A	29-06-1999	NONE	
US 5724701	A	10-03-1998	US 5966773 A	19-10-1999
			US 6035484 A	14-03-2000

[illegible]

Appln = cited in the application as filed

GB SR = cited in the GB Search Report (if any). **Include the category.**

ISR = cited in the International Search Report. **Include the category.**

Other SR = other Search Report e.g. a privately commissioned Search

US inst = US Attorney instructed to include the reference in the US IDS

In US IDS = included in the US IDS

**Note: Check that everything in the "US inst" column is in the "In US IDS" column**

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)



14

Applicant's or agent's file reference M99/0466/PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/03394	International filing date (day/month/year) 04/09/2000	Priority date (day/month/year) 04/09/1999
International Patent Classification (IPC) or national classification and IPC B08B9/032		
Applicant AIM DESIGN LIMITED et al.		



- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 7 sheets, including this cover sheet.
 

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  29/03/2001	Date of completion of this report  25.10.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Benze, W  Telephone No. +49 89 2399 2085  

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03394

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1-12 as originally filed

### Claims, No.:

1-23 as originally filed

### Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03394

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.  
☐ paid additional fees.  
☐ paid additional fees under protest.  
☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.  
☒ not complied with for the following reasons:  
**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.  
☒ the parts relating to claims Nos. 1-3,6-9,11,12,14,20,21,23.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	3-5, 10, 13, 15-19,22
	No:	Claims	1,2,6-9,11,12,14,20,21,23
Inventive step (IS)	Yes:	Claims	
	No:	Claims	3



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03394

Industrial applicability (IA)    Yes:    Claims    1-23  
   No:    Claims

2. Citations and explanations  
**see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03394

Re Point IV

See item 4. below.

Re Point V.

1. A method for clearing pipes (1, 31) having an inlet end (9, 23) and one outlet end (1, 49) is known from DE2629301A comprising
  - at said inlet end (9, 23) forcing a gas (air) into the pipe (31) with said outlet (1, 49) open to discharge pipe contents forced through by said gas, using gas forcing means (29) capable of maintaining an overpressure sufficient therefor at a low velocity (pressure build-up due to sewage and debris restricting the pipe);
  - when said pipe contents have been discharged, again at said inlet end (9, 23) and with said outlet (1, 49) open, forcing a gas (air) into the pipe at a lower overpressure and a higher flow velocity (pressure release after pipe has been cleared of sewage and debris) to clear contents remaining (attaching to the wall of the pipe) after said low flow rate step.

Claim 1 is not new over this state of the art and does not meet the requirements of Article 33 of the PCT.

2. The further characterizing features of claims 2 and 6 to 8 also lack novelty, the high velocity specified in claim 8 being implicit if required to remove remnant liquid and debris.
3. The further characterizing feature of claim 3 is known from US-A-5,915,395 (see also reference to older literature in column 2, lines 60, 61 referring to air scouring of mains) and claim 3 lacks an inventive step, does not meet the requirements of Article 33 of the PCT.
4. The subject-matter of independent claim 1 is already known (see the grounds for this objection in item 1. above). The requisite unity of invention (Rule 13.1 PCT) therefore no longer exists inasmuch as a technical relationship involving one or

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03394

more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of dependent claims:

Claim 4:                   Cleaning fluid (slug) fills the entire pipe;  
claim 5, 13, 15, 16, 18, 19, 22:   Adiabatic heating;  
claim 10:                 Pump.

5. The same comments apply, in analogy, to the apparatus claims 9 to 23.

Re Point VII.

6. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents DE2629301A and US5,915,395A is not mentioned in the description, nor are these documents identified therein.
7. A valve 29a referred to on page 9, second last line and the reference numeral 21 for a tank were not found in the drawing.
8. The reference numeral 67 for a hose on page 11, line 15 is erroneous, 67 having been used for a valved inlet.
9. Apparatus claim 13 refers to any one of claims 7 to 11, of which claims 7 and 8 are method claims.
10. Claim 17 reads "pipe internal pressure means device", a term that is not understandable.

Re Point VIII.

11. The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would have been appropriate, with those features known in combination from the prior art (document DE2629301A) being

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03394

placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

## PATENT COOPERATION TREATY

PCT

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

From the INTERNATIONAL BUREAU

To:

MCNEIGHT, David, Leslie  
McNeight & Lawrence  
Regent House, Heaton Lane  
Stockport  
Cheshire SK4 1BS  
ROYAUME-UNI

Date of mailing (day/month/year) 23 November 2000 (23.11.00)	<b>IMPORTANT NOTIFICATION</b>
Applicant's or agent's file reference M99/0466/PCT	
International application No. PCT/GB00/03394	
International publication date (day/month/year) Not yet published	
Applicant AIM DESIGN LIMITED et al	

- The applicant is hereby notified of the date of receipt (except where the letters "NR" appear in the right-hand column) by the International Bureau of the priority document(s) relating to the earlier application(s) indicated below. Unless otherwise indicated by an asterisk appearing next to a date of receipt, or by the letters "NR", in the right-hand column, the priority document concerned was submitted or transmitted to the International Bureau in compliance with Rule 17.1(a) or (b).
- This updates and replaces any previously issued notification concerning submission or transmittal of priority documents.
- An asterisk(\*) appearing next to a date of receipt, in the right-hand column, denotes a priority document submitted or transmitted to the International Bureau but not in compliance with Rule 17.1(a) or (b). In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.
- The letters "NR" appearing in the right-hand column denote a priority document which was not received by the International Bureau or which the applicant did not request the receiving Office to prepare and transmit to the International Bureau, as provided by Rule 17.1(a) or (b), respectively. In such a case, **the attention of the applicant is directed** to Rule 17.1(c) which provides that no designated Office may disregard the priority claim concerned before giving the applicant an opportunity, upon entry into the national phase, to furnish the priority document within a time limit which is reasonable under the circumstances.

<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
04 Sept 1999 (04.09.99)	9920876.1	GB	16 Octo 2000 (16.10.00)

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. (41-22) 740.14.35	Authorized officer  Somsak Thiphrakesone  Telephone No. (41-22) 338.83.38
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# TENT COOPERATION TRE

PCT

## NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:  
MCNEIGHT, David, Leslie  
McNeight & Lawrence  
Regent House, Heaton Lane  
Stockport  
Cheshire SK4 1BS  
ROYAUME-UNI

Date of mailing (day/month/year) 15 March 2001 (15.03.01)		IMPORTANT NOTICE	
Applicant's or agent's file reference M99/0466/PCT			
International application No. PCT/GB00/03394	International filing date (day/month/year) 04 September 2000 (04.09.00)	Priority date (day/month/year) 04 September 1999 (04.09.99)	
Applicant AIM DESIGN LIMITED et al			

- Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:  
AU,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

- The following designated Offices have waived the requirement for such a communication at this time:  
AE,AG,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,BZ,CA,CH,CN,CR,CU,CZ,DE,DK,DM,DZ,EA,EE,EP,ES,  
FI,GB,GD,GE,GH,GM,HR,HU,ID,IL,IN,IS,JP,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MA,MD,MG,MK,  
MN,MW,MX,MZ,NO,NZ,OA,PL,PT,RO,RU,SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,TZ,UA,UG,UZ,VN,YU,  
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).
- Enclosed with this Notice is a copy of the international application as published by the International Bureau on  
15 March 2001 (15.03.01) under No. WO 01/17700

### REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 19-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

### REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. (41-22) 740.1435	Authorized officer J. Zahra Telephone No. (41-22) 338.83.38
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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>M99/0466/PCT</b>	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. <b>PCT/GB00/03394</b>	International filing date (day/month/year) <b>04/09/2000</b>	Priority date (day/month/year) <b>04/09/1999</b>
International Patent Classification (IPC) or national classification and IPC <b>B08B9/032</b>		
Applicant <b>AIM DESIGN LIMITED et al.</b>		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 7 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  <b>29/03/2001</b>	Date of completion of this report  <b>25.10.2001</b>
Name and mailing address of the international preliminary examining authority:   <b>European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465</b>	Authorized officer  <b>Benze, W</b>  Telephone No. +49 89 2399 2085



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03394

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*):

### Description, pages:

1-12 as originally filed

### Claims, No.:

1-23 as originally filed

### Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:



# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03394

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

## IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.  
☐ paid additional fees.  
☐ paid additional fees under protest.  
☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.  
☒ not complied with for the following reasons:  
**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.  
☒ the parts relating to claims Nos. 1-3,6-9,11,12,14,20,21,23.

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims 3-5, 10, 13, 15-19,22
	No:	Claims 1,2,6-9,11,12,14,20,21,23
Inventive step (IS)	Yes:	Claims
	No:	Claims 3

# **INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

International application No. PCT/GB00/03394

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Industrial applicability (IA)    Yes:    Claims    1-23  
   No:    Claims

2. Citations and explanations  
    **see separate sheet**

## **VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

## **VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03394

Re Point IV

See item 4. below.

Re Point V.

1. A method for clearing pipes (1, 31) having an inlet end (9, 23) and one outlet end (1, 49) is known from DE2629301A comprising
  - at said inlet end (9, 23) forcing a gas (air) into the pipe (31) with said outlet (1, 49) open to discharge pipe contents forced through by said gas, using gas forcing means (29) capable of maintaining an overpressure sufficient therefor at a low velocity (pressure build-up due to sewage and debris restricting the pipe);
  - when said pipe contents have been discharged, again at said inlet end (9, 23) and with said outlet (1, 49) open, forcing a gas (air) into the pipe at a lower overpressure and a higher flow velocity (pressure release after pipe has been cleared of sewage and debris) to clear contents remaining (attaching to the wall of the pipe) after said low flow rate step.

Claim 1 is not new over this state of the art and does not meet the requirements of Article 33 of the PCT.

2. The further characterizing features of claims 2 and 6 to 8 also lack novelty, the high velocity specified in claim 8 being implicit if required to remove remnant liquid and debris.
3. The further characterizing feature of claim 3 is known from US-A-5,915,395 (see also reference to older literature in column 2, lines 60, 61 referring to air scouring of mains) and claim 3 lacks an inventive step, does not meet the requirements of Article 33 of the PCT.
4. The subject-matter of independent claim 1 is already known (see the grounds for this objection in item 1. above). The requisite unity of invention (Rule 13.1 PCT) therefore no longer exists inasmuch as a technical relationship involving one or

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03394

more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of dependent claims:

Claim 4:                   Cleaning fluid (slug) fills the entire pipe;  
claim 5, 13, 15, 16,18,19,22:   Adiabatic heating;  
claim 10:                Pump.

5. The same comments apply, in analogy, to the apparatus claims 9 to 23.

Re Point VII.

6. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents DE2629301A and US5,915,395A is not mentioned in the description, nor are these documents identified therein.
7. A valve 29a referred to on page 9, second last line and the reference numeral 21 for a tank were not found in the drawing.
8. The reference numeral 67 for a hose on page 11, line 15 is erroneous, 67 having been used for a valved inlet.
9. Apparatus claim 13 refers to any one of claims 7 to 11, of which claims 7 and 8 are method claims.
10. Claim 17 reads "pipe internal pressure means device", a term that is not understandable.

Re Point VIII.

11. The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would have been appropriate, with those features known in combination from the prior art (document DE2629301A) being

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03394

placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

## PCT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)





14

Applicant's or agent's file reference M99/0466/PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB00/03394	International filing date (day/month/year) 04/09/2000	Priority date (day/month/year) 04/09/1999
International Patent Classification (IPC) or national classification and IPC B08B9/032		
Applicant AIM DESIGN LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 7 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☒ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  29/03/2001	Date of completion of this report  25.10.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Benze, W  Telephone No. +49 89 2399 2085  

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB00/03394

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1-12 as originally filed

### Claims, No.:

1-23 as originally filed

### Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03394

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):  
*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.  
☐ paid additional fees.  
☐ paid additional fees under protest.  
☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.  
☒ not complied with for the following reasons:  
**see separate sheet**

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☐ all parts.  
☒ the parts relating to claims Nos. 1-3,6-9,11,12,14,20,21,23.

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Yes:	Claims	3-5, 10, 13, 15-19,22
	No:	Claims	1,2,6-9,11,12,14,20,21,23
Inventive step (IS)	Yes:	Claims	
	No:	Claims	3



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/GB00/03394

Industrial applicability (IA)    Yes:    Claims    1-23  
   No:    Claims

2. Citations and explanations  
    **see separate sheet**

**VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB00/03394

Re Point IV

See item 4. below.

Re Point V.

1. A method for clearing pipes (1, 31) having an inlet end (9, 23) and one outlet end (1, 49) is known from DE2629301A comprising
  - at said inlet end (9, 23) forcing a gas (air) into the pipe (31) with said outlet (1, 49) open to discharge pipe contents forced through by said gas, using gas forcing means (29) capable of maintaining an overpressure sufficient therefor at a low velocity (pressure build-up due to sewage and debris restricting the pipe);
  - when said pipe contents have been discharged, again at said inlet end (9, 23) and with said outlet (1, 49) open, forcing a gas (air) into the pipe at a lower overpressure and a higher flow velocity (pressure release after pipe has been cleared of sewage and debris) to clear contents remaining (attaching to the wall of the pipe) after said low flow rate step.

Claim 1 is not new over this state of the art and does not meet the requirements of Article 33 of the PCT.

2. The further characterizing features of claims 2 and 6 to 8 also lack novelty, the high velocity specified in claim 8 being implicit if required to remove remnant liquid and debris.
3. The further characterizing feature of claim 3 is known from US-A-5,915,395 (see also reference to older literature in column 2, lines 60, 61 referring to air scouring of mains) and claim 3 lacks an inventive step, does not meet the requirements of Article 33 of the PCT.
4. The subject-matter of independent claim 1 is already known (see the grounds for this objection in item 1. above). The requisite unity of invention (Rule 13.1 PCT) therefore no longer exists inasmuch as a technical relationship involving one or

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03394

more of the same or corresponding special technical features in the sense of Rule 13.2 PCT does not exist between the subject-matter of the following groups of dependent claims:

Claim 4:                   Cleaning fluid (slug) fills the entire pipe;  
claim 5, 13, 15, 16, 18, 19, 22:   Adiabatic heating;  
claim 10:                 Pump.

5. The same comments apply, in analogy, to the apparatus claims 9 to 23.

Re Point VII.

6. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents DE2629301A and US5,915,395A is not mentioned in the description, nor are these documents identified therein.
7. A valve 29a referred to on page 9, second last line and the reference numeral 21 for a tank were not found in the drawing.
8. The reference numeral 67 for a hose on page 11, line 15 is erroneous, 67 having been used for a valved inlet.
9. Apparatus claim 13 refers to any one of claims 7 to 11, of which claims 7 and 8 are method claims.
10. Claim 17 reads "pipe internal pressure means device", a term that is not understandable.

Re Point VIII.

11. The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would have been appropriate, with those features known in combination from the prior art (document DE2629301A) being

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB00/03394

placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03394

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 B08B9/032

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 B08B E03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 26 29 301 A (ENNEKING) 5 January 1978 (1978-01-05) page 5, line 26 - line 30 page 9, line 24 -page 10, line 5; figure	1,2,6,7, 9-11,14
Y		3,15,17, 19-23
Y	US 5 915 395 A (SMITH) 29 June 1999 (1999-06-29) abstract column 2, line 4 - line 37 column 3, line 6 - line 49 column 4, line 23 -column 5, line 4; figures	3
A		1,6, 9-11,14

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

**\* Special categories of cited documents :**

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

7 December 2000

Date of mailing of the international search report

15/12/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Van der Zee, W

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/03394

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 724 701 A (JONES) 10 March 1998 (1998-03-10) abstract column 4, line 60 -column 5, line 5 column 6, line 23 - line 31 column 7, line 41 - line 52 column 8, line 14 - line 21; figures 1,3	15,17, 19-23
A	-----	1,6, 9-11,14, 18

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Application No

PCT/GB 00/03394

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 2629301 A	05-01-1978	NONE	
US 5915395 A	29-06-1999	NONE	
US 5724701 A	10-03-1998	US 5966773 A US 6035484 A	19-10-1999 14-03-2000

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>M99/0466/PCT</b>	<b>FOR FURTHER ACTION</b> <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/GB 00/ 03394</b>	International filing date (day/month/year) <b>04/09/2000</b>	(Earliest) Priority Date (day/month/year) <b>04/09/1999</b>
Applicant  <b>AIM DESIGN LIMITED</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.  
☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).
3. ☐ **Unity of invention is lacking** (see Box II).

**4. With regard to the title,**

- ☒ the text is approved as submitted by the applicant.
- ☐ the text has been established by this Authority to read as follows:

**5. With regard to the abstract,**

- ☐ the text is approved as submitted by the applicant.
- ☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. The figure of the drawings to be published with the abstract is Figure No.**

- ☐ as suggested by the applicant.
- ☒ because the applicant failed to suggest a figure.
- ☐ because this figure better characterizes the invention.
- 1 ☐ None of the figures.



# INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 00/ 03394

B x III TEXT OF THE ABSTRACT (Continuation of it m 5 of the first sheet)

Reference signs are to be added and put into brackets as follows:

- end (11a) : lines 1, 3 and 8;
- outlets (11b) : lines 2, 3, 4 and 8 (twice);
- pipe (11) : lines 3, 9 and 10;
- means (12): line 5.

## INTERNATIONAL SEARCH REPORT

International Application No

GB 00/03394

**A. CLASSIFICATION OF SUBJECT MATTER**  
 IPC 7 B08B9/032

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
 IPC 7 B08B E03F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

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	--- -/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

7 December 2000

Date of mailing of the international search report

15/12/2000

Name and mailing address of the ISA

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 NL - 2280 HV Rijswijk  
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 Fax: (+31-70) 340-3016

Authorized officer

Van der Zee, W

## INTERNATIONAL SEARCH REPORT

International Application No

/GB 00/03394

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 724 701 A (JONES) 10 March 1998 (1998-03-10) abstract column 4, line 60 -column 5, line 5 column 6, line 23 - line 31 column 7, line 41 - line 52 column 8, line 14 - line 21; figures 1,3	15,17, 19-23
A	-----	1,6, 9-11,14, 18

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

GB 00/03394

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
DE 2629301	A	05-01-1978	NONE		
US 5915395	A	29-06-1999	NONE		
US 5724701	A	10-03-1998	US 5966773	A	19-10-1999
			US 6035484	A	14-03-2000